

REMARKS

Claims 1-3 are pending, of which claim 1 is independent. Claims 1-3 stand rejected.

Examiner Interview

The applicant wishes to thank the Examiner for her consideration during the Examiner Interview held on October 31, 2007. The Examiner and the applicant agreed that Tsutsui et al. failed to disclose “an optimum offset value obtained in a previous optimum offset value calculation processing, and setting the second and third offset values respectively at second and third offset values set in a previous optimum offset value” as recited in the independent claim. Therefore, withdrawal of the prior art rejections is respectfully requested.

Rejections under 35 USC §102 (b)

Claim 1 is rejected under 35 U.S.C. §102(b) as being anticipated by Tsutsui et al. (U.S. 5,808,983), and claim 2 is rejected as being anticipated by the so-called “admitted prior art.”

The present invention is a disk playback device. The disk playback device has a spindle motor (2) for rotating a magneto-optical disk (1), a magnetic head (3) and an optical head (5) provided above and below the disk (1). A magnetic head drive circuit (4) is connected to the magnetic head (3) while a laser drive circuit (6) is connected to the optical head (5). Connected to the magnetic head drive circuit (4) and the laser drive circuit (6) is a control circuit (7). Further, an output signal from the optical head (5) is fed to the control circuit (7). A servo circuit (9) is connected to the spindle motor (2) and the optical head (5). A focus error (FE) signal and a tracking error (TE) signal are obtained from the optical head (5) and are fed to a servo circuit (9) from the control circuit (7). Further, a temperature sensor (8) for measuring the temperature of the disk (1) is

connected to the control circuit (7). Based on temperature data, an offset adjustment procedure is executed in which optimum offset values respectively for the FE signal and the TE signal are determined. The FE signal and the TE signal given the offset adjustment are input to the servo circuit (9), and are fed to a focus servo and a tracking servo.

The adjustment procedure used by the control circuit (7) determines an optimum value of offset for the FE signal based on amplitude values of the TE signal or an RF signal fed from the optical head (5) and makes an offset adjustment with reference to an optimum value. The control circuit (7) approximates the relationship between offset values and the amplitude values to a quadratic curve with reference to three different offset values and three amplitudes at the respective offset values. The control circuit (7) then repeats the calculation of an optimum offset value corresponding to the peak of the quadratic curve, and sets the three different offset values respectively at an optimum value obtained in the previous optimum offset value calculation processing.

Tsutsui describes a recording apparatus, such as a disk drive, in which the amplitude value of the tracking error signal is sampled at three different points. FIG. 7 of Tsutsui shows a graph illustrating the principle behind in detecting an optimum point from a sudden ascending variation point and a sudden descending variation point. FIG. 7 of Tsutsui is effectively identical to FIGS. 19 and 20 of the present application representing the prior art. Further, an offset generation circuit (43) is used to generate an offset signal with which the tracking error signal detected by a level detection circuit (41) exhibits a maximum amplitude, the offset generation circuit (43) to thereafter generate the offset signal continuously.

To sustain a rejection under 35 U.S.C. §102, a reference must disclose each and every step of a rejected claim. Applicant's analysis of Tsutsui reveals this reference does not disclose each and every feature of independent claim 1. At a minimum, Tsutsui does not disclose the value setting means setting the first offset value at an optimum offset value obtained in a previous optimum offset value calculation processing, and setting the second and third offset values respectively at second and third offset values set in a previous optimum offset value calculation processing. Accordingly, Tsutsui does not anticipate the subject matter of independent claim 1.

Regarding claim 2, the background art described on pages 1-13 of the specification describes a disk recording and playback device. When disk recording-playback device is in operation a focus servo or tracking servo is actuated for the actuator incorporated in the optical head, based on focus error (FE) signals and tracking error (TE) signals. When the device is initiated into operation, an offset adjustment is made for focusing or tracking based on a TE signal and RF signal. However, a problem exists in the offset adjustment procedure. The relationship between the offset values and the amplitude values is approximated to a quadratic curve with reference to the previous optimum offset value P_{opt1} , and the second and third offset values P_1' , P_4' each having an amplitude value smaller than the amplitude value T_{opt1} at the offset value P_{opt1} by a predetermined value or more, as shown in FIG. 20. In order to obtain the second and third offset values P_1' , P_4' , amplitude values of at least five different offset values P_{opt1} and P_1' to P_4' need be measured, requiring a long period of time for determining the quadratic curve. Therefore, a long period of time is needed to calculate the optimum offset value. These deficiencies are symptomatic of the background art, which does not anticipate the subject matter of Applicant's dependent claim 2.

Rejection under 35 U.S.C. §103(a)

U.S. Patent Application Serial No. 10/523,519
Amendment filed November 20, 2007
Reply to OA dated June 22, 2007

Claim 3 is rejected 35 U.S.C. §103(a) as being unpatentable over Tsutsui and the alleged admitted art in view of Asano et al. (U.S. 2004/00227947).

On pages 5 and 6 of the Office Action, the Office Action indicates that the features of claim 3 can be found in paragraphs [0025] and [0026] of Asano and asserts it would have been obvious to one of ordinary skill in the art to modify the Tsutsui device in view of Asano to detect temperature variations.

Applicant respectfully disagrees. First, Asano does not remedy the shortcomings of Tsutsui as a primary reference. Second, Tsutsui does not anticipate the subject matter of independent claim 1, which is allowable over Tsutsui. Claim 3 depends from claim 1 and is allowable for at least the same reasons.

Therefore, withdrawal of the rejections of claims 1-3 is respectfully requested.

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Conclusion

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP



George N. Stevens
Attorney for Applicant
Reg. No. 36,938

GNS/jls
Atty. Docket No. **050066**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930



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PATENT TRADEMARK OFFICE